Truck; Manlift; 54 Foot with Pedestal

Check If Meet **Describe Offered Alternatives Specification Requirements** or **Exceed** I. General: 1. This specification intends to describe the Department of Transportation's requirements for a manlift with an additional 10 foot elevating platform and service body. 2. The service body shall be the manufacturers standard, galvanized, line haul configuration, meeting these specifications. 3. Bidders shall provide a detailed measured drawing of the unit bid, to include all compartment dimensions, and a weight distribution analysis. 4. Trade-In: The department desires to trade-in the aged unit(s) being replaced; Therefore, a trade-in offer is required for this purchase. WSDOT reserves the right to accept or reject any offer. If WSDOT elects to accept trade-in offers, a Best Buy evaluation methodology will be used to determine the purchase; whereas both the bid price and the trade-in offer will be taken into consideration to determine the overall best purchase for the state taxpavers. If the trade-in offer is not acceptable, only the bid price will be considered. If a trade-in offer is accepted, the seller agrees to invoice WSDOT the full bid amount of the unit(s) bid, and to write a check to the department for the trade-in unit.

Check If Meet **Describe Offered Alternatives Specification Requirements** or Exceed Cab and Chassis shall be an International 7400 II. Chassis, Load capacity and Measurements: 1. The Chassis load rating shall be 36,000 lbs (GVWR). 2. The wheelbase, cab to axle, and bumper to back of cab measurements shall be determined by the successful bidder. III. Frame: 1. The entire length of the frame rails shall be full depth. 2. Both frame rails, from front to rear, shall be constructed with 110,000 psi steel, with a section modulus of 30.00 and an RBM of 3,300,000 in. lbs. 3. The section modulus at the engine cut outs shall be at least 18.00, with an RBM of 2,000,000. 4. There shall be no holes or bolts in the top flange of the frame rails, from the back of the cab to the trunnion. 5. Cross-members shall not be riveted to the frame rails, however cross-member components may be riveted to form a cross-member assembly. 6. Shall have a steel front bumper, with two front tow loops or hooks accessible through the bumper.

If Meet **Describe Offered Alternatives Specification Requirements** or **Exceed** IV. Cab and Related Equipment: 1. Shall be a manufacturer's standard cab with at least 21 inches of clear space between the driver and passenger seat. 2. Exterior of the Cab shall be painted with Sikkens 4039 (national safety yellow). 3. Hood and fenders shall tilt forward to a stable position and allow full and unrestricted access to the engine compartment. 4. When the hood and fenders are tilted forward, the grill shall not come in contact with the front bumper 5. There shall be a 10 gauge, 1/4 inch, mesh stone guard, mounted behind the grill to protect the radiator. 6. The unit shall be equipped with the following: a. Engine voltmeter **b.** Engine oil pressure gauge. c. Tachometer, and Hour-meter. **d.** Engine coolant temperature gauge. e. High output heater w/fresh air selection. The heater shall have a BTU rating of at least 30,000. **f.** Sun visors for both driver and passenger. g. Factory installed air conditioning. **h.** Visual and audible low oil pressure / high coolant temperature warning system. 7. Dual, heated 6 x 16 inch rearview mirrors. The passenger side mirror shall be motorized. The mirrors shall be equipped with a 10-inch convex spot mirror. 8. Shall be equipped with an air horn. 9. Shall be equipped with cowl mounted, electric, intermittent, windshield wipers, to include a HD wiper motor(s). 10. The wiper linkage shall be a heavy-duty formed linkage.

Check If Meet **Describe Offered Alternatives Specification Requirements** or Exceed 11. The cab noise level shall not exceed 84 dB (A) inside the cab with windows closed, measured at 1800 RPM and at normal road speed. 12. The cab interior package shall be an International Premium pkg. This includes, increased insulation on the floor, and the engine cover. 13. Shall be equipped with left and right egress / ingress assist handles. 14. Shall be equipped with an AM/FM Radio. V. Radio Installation: 1. The cab shall be outfitted with a header pocket to accommodate an EF Johnson radio. (Part # 242-97-55-111.) The measurements of the radio are as follows: **a.** Width 7 ^{3/16} inches. **b.** Length 8 ^{5/16} inches. c. Thickness 2 1/8 inches. 2. The radio shall be located in a manner that allows the operator to read the LCD without detracting from road visibility. The radio shall be accessible by the operator and be within arms reach of an average person. 3. When installed; the face of the radio shall not extend further than one inch out of the pocket. Note: WSDOT will loan an EF Johnson radio to the successful bidder, as a production aid. 4. Within the radio pocket, there shall be a factory-installed radio-mounting bracket, which will accept the EF Johnson radio. The radio shall have the ability to be removed and reinstalled without removing the header panel. 5. To the left of the radio pocket and as close as possible to the radio, a microphone-mounting clip shall be installed.

If Meet **Describe Offered Alternatives Specification Requirements** or Exceed 6. On the exterior of the cab roof, there shall be a factory installed Larson NMO-K-DS-FME antenna base. The specific mounting location shall provide the antenna with at least 18 inches of clear area around the antenna base and at the tip of the antenna when a body cab shield is used. 7. The roof mount antenna base shall be sealed and capped with a protective cover for shipping. 8. The antenna cable shall extend to the center radio pocket, and extend at least six inches outside of the radio pocket. 9. Above the rear window and centered in the cab, shall be a factory installed and functional twoway radio speaker for the EF J radio. 10. At the main fuse panel there shall be a labeled, dedicated, and *fused*, 15-amp constant duty circuit for the EFJ Radio. This circuit shall run directly from a battery power source. At the same location, there shall be a labeled 3 amp fused circuit. This circuit shall be switched at the ignition switch, and shall operate in the run or accessory positions. 11. Connected to the 15amp EFJ circuit shall be a power wire. (EFJ Part# 023-9750-010 or equal) This wire shall extend up to the header with no splices, and extend at least six inches outside of the pocket. 12. Connected to the 3 amp EFJ circuit shall be a sense wire. (EFJ Part # 023-9750-011 or equal) This wire shall extend up to the header, with no splices and extend at least six inches outside of the pocket

If Meet **Describe Offered Alternatives Specification Requirements** or Exceed VI. Seats 1. Driver's seat shall be a cloth covered high back National air ride seat. 2. Passenger seat shall be a cloth covered high back National high back, non-suspension. 3. Both seats shall have compatible; three point type seat belts with shoulder strap, and retractors. VII. Fuel Tank: 1. Shall have a 70-gallon fuel tank mounted on the left side frame rail. 2. The tank shall be equipped with two non-skid, raised expanded metal steps. 3. Shall not extend more than 6 inches past the back of the cab. VIII. <u>Electrical & Lighting Systems:</u> Note: All chassis lighting shall be conventional lighting (International lighting is not acceptable). 1. Shall be a 12-volt system. 2. Batteries shall have at least 1,950 cold cranking amps (CCA) and be maintenance-free. 3. The battery box cover shall be constructed of a non-metallic reinforced material. The batteries shall rest in a plastic tray.

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b. Back lit, and labeled rocker panel switches

4. The battery box shall be right side frame rail mounted, as close behind the cab as practical

5. All cable ends shall be sealed, and equipped

6. Shall have a, six-position switch panel with the following They shall operate from the ignition switch in both run and accessory positions, and

with rubber retainers and covers.

a. Automatic circuit protection.

all switches shall be on/off

	Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
	c. First switch (Strobe)		
	d. Second switch (Work Light)		
	e. Third switch (Alt. Flash)		
	f. The fourth, fifth and sixth switch are powered and not labeled		
7.	Bidder must ensure that the control panel on all equipment associated with this purchase, are wired and labeled uniformly.		
8.	A round 7-conductor, cable shall be wired to the rear of the chassis and terminate into a standard 7 pole trailer connector with ABS. (Conventional Wiring)		
9.	Shall be equipped with halogen headlamps.		
10.	Supplier splices into the factory wiring harness is unacceptable and may be grounds for bid rejection.		
IX. <u>E</u> 1	ngine		
1.	Shall be powered by a DT530E developing 275 H.P. at 2000-2200 RPM and 800 ft. lbs. of torque at 1200 RPM.		
2.	Shall be equipped with an exhaust brake.		
3.	Electronic engine controls shall have the following settings:		
	a. Maximum road speed to be 65 mph.		
	b. Cruise control speed to be 60 mph.		
	c. Automatic Idle shut down to be 10 minutes.		
	d. Idle, Set 650, Resume 1,000.		
	e. Shall have idle bump up/down feature.		
4.	Shall be equipped with 1500 watt 110 volt block heater, with the plug-in receptacle located on the left side under the driver's door.		

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
X. Air Cleaner:		
 Shall be dual element, dry-type, with fresh air intake. 		
 A vacuum, needle restriction indicator gauge, shall be mounted on the dash; and it must indicate restriction for both elements. 		
3. The air cleaner lid shall have release latches or thumbscrews for quick and easy access to the air cleaner.		
XI. Engine Cooling System:		
 Shall be equipped with a temperature controlled, air clutch fan drive. 		
Radiator shall be a cross flow, copper core, with deaeration system and coolant filter.		
3. Antifreeze protection shall be at least -35 $^{\circ}$.		
XII. Engine Exhaust System:		
 Shall be a single horizontal muffler and vertical pipe. 		
2. The end of the exhaust pipe shall have a 45-degree tip out, positioned 118 inches from the ground to the highest point of the tip out when the truck is empty.		
XIII. Transmission:		
Shall be an Allison MD3560 six speed.		
XIV. Steering System:		
1. Shall have a dual Shepherd power steering system.		
2. Steering wheel shall be 18 inches in diameter.		
3. Steering column shall be fully adjustable.		

Check If Meet **Describe Offered Alternatives Specification Requirements** or **Exceed** XV. Axles and Suspension: 1. Front Axle shall be 16,000 lbs. with Stemcotype seals and grit guards, and heavy-duty double acting shock absorbers. 2. *Rear Axle* shall have a 23,000-pound rear axle with a 31,000 lbs. rear suspension and 4.500 lbs. multi-leaf auxiliary springs. 3. The rear axle shall have a gear ratio to allow 65mph. XVI. Wheels and Tires: 1. *Front wheels* shall be Hub Pilot with 385/65R 22.5 LRJ steel belted Goodyear tubeless tires. 2. *Rear wheels* shall be Hub Pilot with Goodyear G164 RTD 11 R 22.5 LRG steel belted tires. The center hub shall have a thickness of at least .472 inches XVII. Brake System: 1. Shall be a Bendix anti-lock series air braking system. 2. Shall have self-adjusting "S" cam air brakes front and rear, with shields installed. 3. Shall have outboard mounted brake drums, with $16 \frac{1}{2}$ x 5-inch front drums and $16 \frac{1}{2}$ X 7 rear drums. 4 All brake blocks shall be non-asbestos 5. Shall have 30 sq. In. MGM TR-T series rear brake chambers. 6. Shall have at least a 13 C.F.M. air compressor, with intake plumbed to the filtered side of the air cleaner. 7. Shall have the Rockwell Wabco System Saver 1200 air dryer. 8. Air tanks shall be mounted below the cab.

If Meet **Describe Offered Alternatives Specification Requirements** or **Exceed** XVIII. Service Body & Aerial: 1. The successful bidder shall construct the service body as close to the below listed measurements as possible. a. Overall Width 94 inches **b.** Overall height 48 inches c. Inside floor width 58 inches **d.** Overall length 118 inches 2. All compartment doors shall be 16 gauge, double panel, and watertight. 3. There shall be drip rails installed above each compartment. 4. All compartments shall be equipped as follows. a. Continuous rubber automotive type door seal. **b.** D Ring twist handles **c.** Protection on the inside to prevent loose objects from jamming the locking mechanism d. Keyed to WSDOT lock # CH501 e. Vista Track Lighting with individual door jam switches **f.** The vista track lighting shall be cab controlled with a labeled and backlit master switch located on the chassis switch panel. g. Removable rubber drain plugs **h.** All drawers shall be equipped with steel rollers, and have the ability to lock in either the open or closed position. Each drawer will have a capacity of 100 pounds i. All compartments shall have a master binlocking device located at the rear of the service body. 5. The unit will be shipped with a model 675 Wilton 5 ½ inch vise to include all mounting hardware.

Check If Meet **Describe Offered Alternatives Specification Requirements** or Exceed 6. The curbside of the body shall have front & rear V shaped, adjustable pole rests equipped as follows a. Pole locking straps **b.** Ability to lock in 1 inch increments c. An 8 to 12 inch adjustable spread **d.** The V portion will be lined with protective rubber pads 7. Shall be equipped with a removable pipe support in the rear curbside wheel chock opening. 8. Shall have three sets of HD hooks, measuring 6 inches X 6 inches mounted in a squared "U" shape. Two shall be mounted on the interior, curbside front wall. One shall be mounted on the rear of the hydraulic tank. 9. Cone holders to be installed at the front and rear of unit. 10. Shall have right and left grab handles installed 60" above the ground at the body access step area. 11. The unit shall be equipped with four rubber wheel chocks with expanded metal storage compartments located in close proximity to the rear wheels. 12. The complete underside of the body and chassis shall be sprayed with a rubberized undercoating.

If Meet **Describe Offered Alternatives Specification Requirements** or Exceed **XIX.** Compartment Locations and Configurations: 1. Directly behind the elevator on the curbside, shall be a vertical compartment equipped as follows a. Vents on the inner wall and rear wall **b.** Seven, 3 inch J hooks in a 2-3-2 configuration **c.** A 12-volt heater, with a cab-controlled switch 2. To the rear of the vertical compartment shall be a 24-inch wide access to the bed between the curbside front vertical compartment, and the curbside horizontal compartment. A fixed 6"deep grip strut step shall hang below body steps. 3. To the rear of the access step and above the rear duals, shall be a horizontal compartment equipped as follows. **a.** A top hinge door with gas struts **b.** One adjustable height full width shelf. **c.** Drop in dividers on 2" centers **d.** A 12 inch x 16 inch three drawer compartment To the rear of the horizontal compartment, shall be a vertical compartment equipped as follows. a. Three adjustable height shelves, with dividers on 2-inch centers. **b.** Two drawers measuring 11 inches wide, 14 inches deep, and 4 inches high. 5. Directly behind the elevator on the street side, shall be two vertical compartments to include 2 adjustable shelves with drop-in dividers on 2inch centers. 6. To the rear of the two vertical compartments shall be a horizontal compartment equipped as follows:

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternativ
a. A top hinge door with gas struts		
b. One adjustable height full width shelf.		
c. Drop in dividers on 2" centers		
d. A 12 inch x 16 inch three drawer compartment		
To the rear of the horizontal compartment, shall be a vertical compartment equipped as follows.		
a. Three adjustable shelves, measuring 15 inches deep with dividers on 2-inch centers.		
b. The shelves shall be adjustable within a range of 28 to 40 inches.		
c. Two drawers measuring 11 inches wide, 14 inches deep, and 4 inches high.		
d. One fixed shelf installed 22 inches from the bottom of the compartment.		
Shall have an open top, three sided, steel, storage box measuring 18 inches square, and 6 inches high, mounted on the curbside of the tail shelf.		
Shall have a watertight storage compartment mounted on top of the curbside compartments, and located at the rear of the body.		
a. 68-inches long X 18-inches wide X 12-inches high		
b. Accessible from the interior of the body.		
Shall have a 70-inches long X 18 inches wide X 12 inches high expanded metal, open top, compartment mounted on the street side compartments, and located at the front of the body.		

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
XX. Rear Tail Shelf and Compartment:		
 There shall be a 24-inch deep 18 inches high, full width tail shelf equipped as follows. 		
a. The top shall be 3/16 diamond plate.		
b. Pool type handrails on each side.		
c. Fold down doors with "D" Ring twist door locks with chain stops.		
d. A center mounted, corrugated, non-skid step, measuring 18 inches wide and 5 inches deep.		
e. A license plate mount and light		
f. A handrail from the bucket support to the rear edge of the tail shelf.		
g. One curbside 48-inch long, full depth, 6-inch high, sliding drawer. This drawer will be lockable when half way extended, fully extended, and fully retracted.		
h. One street side mounted, 26-inch long, full depth, 6-inch high sliding drawer		
i. The drawers shall have roller slides capable of supporting 500 lbs when fully extended.		
j. Shall have a full width, full depth, shelf ½ inch above the top edge of the drawers		
2. There shall be a square tube receiver hitch assembly in the rear tail shelf, complete with safety chain D rings, 2-5/16 ball Pintle Hitch.		

Check If Meet **Describe Offered Alternatives Specification Requirements** or **Exceed** XXI. Aerial Type: 1. Unit shall be an insulated, 3-section, reverse mount, elevating and telescoping boom with a two section vertical lift, to include a ten-foot elevator. 2. The aerial shall meet the following requirements **a.** Vertical reach of 50 feet to the bottom of the platform. **b.** Horizontal reach of 29 feet measured from the centerline of the chassis to the centerline of the platform. c. The platform shall be accessible from the ground in the fully lowered position **d.** Boom Elevation: -25 degrees to +80 degrees minimum. 3. Shall have expanded metal; guards with lockable and hinged doors to prevent individual's form entering the scissors lift mechanism. 4. The boom shall have the ability to lift 1000 pounds at a 30-degree boom angle. 5. The unit shall be equipped with an audible automatic boom overload system. 6. The unit shall have a boom rest and lock down strap located on the street side of the chassis. 7. The turret shall be capable of rotating 360 degrees continuously. 8. The Aerial shall have the ability to reposition loads with either a winch or the boom.

	Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
XII. <u>Tv</u>	wo Person Platform:		
1. T	he platform shall be a		
a.	Boom Mounted		
b.	Automatic Self Leveling		
c.	Measurers 36 X 60 X 42 inches		
d.	600 Pound capacity		
e.	Metal framed and encompassed with ¼ inch expanded metal, to include a latachable gate.		
f.	Hydraulically tilt able.		
g.	Stows in a level position		
h.	(Optional pricing) for a two-person basket to include Rotation around the boom tip.		
	Note: A free-swinging basket is not cceptable.		
i.	Shall have 2- full-bodied ANSI approved safety harnesses and shock absorbing lanyards.		
j.	The boom shall have one harness attaching point on each side.		
k.	The interior of the service body shall have a platform support with steps to allow access onto the platform from inside the service body.		

Check If Meet **Describe Offered Alternatives Specification Requirements** or **Exceed XXIII. Controls:** 1. There shall be two sets of controls; one set at the platform and the other will be located on the front curbside vertical compartment and accessible from inside the body. 2. The controls located in the platform shall be able to be operated from either side of the platform. 3. The platform controls will be an all function, single joystick, control, to include a Dead-Man feature and interlock. 4. Controls shall have full feathering capability, and self-centering. 5. The unit shall be equipped with a stop-start, two-speed throttle, and emergency power for both control locations. 6. The emergency power function shall control all working positions, to include the outrigger functions. 7. The stop-start system shall not allow the starter to engage while the engine is running. XXIV. Outriggers: 1. The unit will be equipped with four (4) outriggers. 2. The outriggers shall be a modified "A" frame telescoping type with a double-acting hydraulic cylinder assembly. 3. The outrigger spread shall not exceed 120 inches measured center to center. 4. The operator shall have the ability to switch from boom control to outrigger controls at the outrigger control locations. 5. The edges of the outrigger pads shall be rolled. 6. Outrigger alarm will sound when outriggers are activated.

Check If Meet **Describe Offered Alternatives Specification Requirements** or Exceed 7. All exposed electrical and hydraulic lines to the outriggers shall be protected from road debris and chaffing. XXV. Driving Power and Hydraulic System: The hydraulic system shall be driven by a Hot 1. Shift power-take-off. 2. The hydraulic system shall be activated via a cab-controlled switch. 3. When the air brakes on the chassis are relieved the hydraulic pump shall disengage. 4. The hydraulic system shall provide continuous full feathering capability 5. The Allison transmission shall provide torque converter lock-up when the Aerial is operational. 6. All hydraulic lines shall be installed to allow replacement without welding or cutting any hydraulic lines or fittings. 7. All Hydraulic components shall be shielded/protected from the chassis exhaust system. 8. The hydraulic oil reservoir shall be baffled and equipped with a visible sight glass 9. A 100 mesh suction screen shall be provided and rated at double the system capacity. 10. The return line filter shall be a 10-micron, replaceable cartridge and be rated at three times the system capacity. 11. The suction screen and return line filters shall be serviceable without draining the reservoir. 12. All hydraulic hoses and fittings shall be Weatherhead.

	Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
XXVI.	Safety:		
1.	The unit must meet all current OSHA/WISHA aerial standards, to include all provisions of the Washington State Department of Labor and Industries Safety Regulations. (Chapter 296-45 WAC)		
2.	The unit shall comply with all provisions of ANSI A92.2 (1990)		
XXVII	Options Material Handling Pricing:		
1.	A hydraulic driven winch shall be located under the boom and shall be mounted as close to the end as possible.		
2.	The winch shall have variable speed power forward and reverse with an automatic brake.		
3.	The winch capacity shall be 750 pounds on the first wrap of the drum.		
4.	The winch shall be supplied with 80 feet of stable braid synthetic rope with a swivel block and Alloy model WLL3T" hook.		
5.	A two-part attachment point shall be provided.		
6.	The winch shall be operable at the service body controls		

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
XXVIII. Electrical:		
 All wiring shall be weather tight, routed in protective split loom, and will not be bundled with hydraulic hoses. 		
All body lights will be flush mounted in rubber grommets.		
3. There shall be one cab controlled Echo Model #6665 strobe light mounted at the front, and on each side of the service body with 360 degree visibility.		
4. There shall be one cab controlled Echo Model #6665 strobe, mounted on each side of the tail shelf with 180-degree visibility. These lights will not extend higher than the compartments.		
5. There shall be one flush mounted, cab controlled Echo Model #2140A strobe light mounted on each side of the rear tail shelf.		
6. The unit shall be equipped with a flush mounted stairway light, which will activate with the chassis running lights.		
7. There shall be a Safe T Lite Model 9036-3013. (110 volt, 20 amp) cord reel mounted behind the rear vertical curbside compartment to include 75 feet of cord.		
8. There shall be a single gang; flush mounted, waterproof, GFCI 20 amps electrical box in close proximity to the cord reel.		
9. The unit shall be equipped with a Honda EM5000 SX generator.		
10. Shall have a 7-wire metal trailer plug. (Industry standard trailer wiring).		

	Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
XXIX.	Exterior Finish:		
	WSDOT expects professional workmanship on all products purchased. With this in mind, the following finishing requirements will be closely scrutinized during the specification compliance inspection.		
1.	There shall be no welding scale, roughness, sharp corners; or rust stains on the unit.		
2.	The unit shall be coated with 2 mils dry automotive quality primers, with an additional 2 mils dry of Sikkens (4039) or DuPont (7044) National Safety Yellow.		
3.	The body paint shall be warranted against rust and corrosion for five years.		
4.	The body floor, tail shelf, and compartment tops will be painted with a black, non-skid material to include a 5-year warranty against peeling.		
5.	Each side of the trailer shall be equipped with the WSDOT decals prior to the compliance inspection. The successful bidder will notify <i>Billboard Signs at 206-300-7300</i> for installation. The decaling will be invoiced to WSDOT by the installer.		
XXX.	Publications:		
1.	Each unit shall be delivered with an operator's manual.		
2.	Bidders shall the Service, and Parts Manuals for this unit, as annotated below.		
	1 Parts Manual		
_	1 Service Manual		